

Amendments to the Claims:

This listing of claims will replace all prior versions and listings of claims in the application:

Listing of Claims:

1. (Currently amended) A heat-transfer label, said heat-transfer label comprising:

(a) ~~a transfer portion, said transfer portion comprising~~

~~_____ (i) an ink design layer, and~~

~~_____ (ii) a heat-activatable adhesive layer over said ink design layer, and~~

(b) a support portion, ~~said transfer portion being positioned over said support portion for transfer of the transfer portion from the support portion to an article under conditions of heat and pressure, said support portion comprising~~

(i) a carrier, wherein said carrier is made of a polymer selected from the group consisting of polyesters, polyolefins and polyamides, and

(ii) a first release coating positioned over said carrier, said first release coating being made of a non-wax, non-silicone, thermoset release material, ~~said first release coating separating cleanly from said transfer portion with no visually discernible portion of said first release coating being transferred to the article along with said transfer portion, said first release coating having a total surface energy of about 25 to 35 mN/m, of which about 0.1 to 4 mN/m is polar surface energy, and being made by (A) applying to the carrier in its amorphous or semi-oriented state a composition comprising (1) a functionalized α -olefin containing copolymer and (2) a crosslinking agent; and (B) reacting said composition with the carrier during uniaxial or biaxial stretching and heat setting; and~~

(b) a transfer portion, said transfer portion being positioned over said support portion for transfer of the transfer portion from the support portion to an article under conditions of heat and pressure, said transfer portion comprising

(i) an ink design layer, said ink design layer being positioned over said first release coating, and

(ii) a heat-activatable adhesive layer positioned over said ink design layer;

(c) whereby said first release coating separates cleanly from said transfer portion with no visually discernible portion of said release coating being transferred to the article along with the transfer portion.

2. (Currently amended) The heat-transfer label as claimed in claim 1 wherein said first release coating has a total surface energy of about 30 mN/m, of which about 1.3 mN/m is polar surface energy.

3. (Original) The heat-transfer label as claimed in claim 1 wherein said first release coating is in direct contact with said transfer portion.

4. (Original) The heat-transfer label as claimed in claim 1 wherein said transfer portion further comprises a protective lacquer layer, said ink design layer being positioned over said protective lacquer layer, said first release coating being in direct contact with said protective lacquer layer.

5. (Original) The heat-transfer label as claimed in claim 1 wherein said first release coating has a thickness of about 0.01 to 10 microns.

6. (Original) The heat-transfer label as claimed in claim 5 wherein said first release coating has a thickness of about 0.02 to 1 micron.

7. (Original) The heat-transfer label as claimed in claim 6 wherein said first release coating has a thickness of about 0.1 micron.

8. (Original) The heat-transfer label as claimed in claim 1 wherein said first release coating has a carbon content (by atomic %) of about 90 to 99.9% and an oxygen content (by atomic %) of about 0.1 to 10%, as measured by X-ray photoelectron spectroscopy.

9. (Original) The heat-transfer label as claimed in claim 8 wherein said first release coating has a carbon content (by atomic %) of about 97% and an oxygen content (by atomic %) of about 3%, as measured by X-ray photoelectron spectroscopy.

10. (Original) The heat-transfer label as claimed in claim 1 wherein said first release coating exhibits a release value of about 70-350 g/inch when an adhesive film which has been applied thereto is removed therefrom at a 15 degree angle using Scotch 810 tape at a rate of 12 in/min at room temperature.

11. (Original) The heat-transfer label as claimed in claim 10 wherein said first release coating exhibits a release value of about 125-200 g/inch when an adhesive film which has been applied thereto is removed therefrom at a 15 degree angle using Scotch 810 tape at a rate of 12 in/min at room temperature.

Claim 12 (Canceled).

13. (Original) The heat-transfer label as claimed in claim 1 wherein said carrier is made of a polymer selected from the group consisting of polyethylene terephthalate and polyethylene naphthylene.

14. (Original) The heat-transfer label as claimed in claim 1 wherein said carrier is made of a polymer selected from the group consisting of polyethylene and polypropylene.

Claim 15 (Canceled).

16. (Currently amended) The heat-transfer label as claimed in claim ~~15~~1 wherein said functionalized α -olefin containing copolymer is an acid functionalized α -olefin containing copolymer.

17. (Original) The heat-transfer label as claimed in claim 16 wherein said acid functionalized α -olefin containing copolymer is selected from the group consisting of ethylene/acrylic acid copolymers; ethylene/methacrylic acid copolymers; ethylene/vinylacetate/acrylic acid terpolymers; ethylene/methacrylamide copolymers; ethylene/glycidyl methacrylate copolymers; ethylene/dimethylaminoethyl methacrylate copolymers; ethylene/2-hydroxyethyl acrylate copolymers; and propylene/acrylic acid copolymers.

18. (Currently amended) The heat-transfer label as claimed in claim ~~15~~1 wherein said crosslinking agent is selected from the group consisting of amino formaldehyde resins, polyvalent metal salts, isocyanates, blocked isocyanates, epoxy resins and polyfunctional aziridines.

19. (Original) The heat-transfer label as claimed in claim 1 wherein said heat-activatable adhesive comprises a polyester resin.

20. (Original) The heat-transfer label as claimed in claim 19 wherein said heat-activatable adhesive further comprises a wax.

21. (Original) The heat-transfer label as claimed in claim 20 wherein said wax is a paraffinic wax.

22. (Original) The heat-transfer label as claimed in claim 4 wherein said protective lacquer layer comprises a phenoxy resin.

23. (Original) The heat-transfer label as claimed in claim 1 wherein said support portion further comprises a second release coating, said second release coating being positioned under said carrier.

24. (Original) The heat-transfer label as claimed in claim 23 wherein said second release coating is substantially identical in composition to said first release coating.

25. (Original) The heat-transfer label as claimed in claim 1 wherein said carrier and said first release coating are optically clear.

Claims 26-37 (Canceled).

38. (Currently amended) A transfer label comprising:

(a) ~~a transfer portion, said transfer portion comprising~~

~~(i) an ink design layer, and~~

~~(ii) a pressure-sensitive adhesive layer over said ink design layer, and~~

~~(b) a support portion, said transfer portion being positioned over said support portion for transfer of the transfer portion from the support portion to an article under conditions of pressure, said support portion comprising~~

~~(i) a carrier, wherein said carrier is made of a polymer selected from the group consisting of polyesters, polyolefins and polyamides, and~~

~~(ii) a first release coating positioned over said carrier, said first release coating being made of a non-wax, non-silicone, thermoset release material, said first release coating separating cleanly from said transfer portion with no visually discernible portion of said first release coating being transferred to the article along with said transfer portion, said first release coating having a total surface energy of about 25 to 35 mN/m, of which about 0.1 to 4 mN/m is polar surface~~

energy, and being made by (A) applying to the carrier in its amorphous or semi-oriented state a composition comprising (1) a functionalized α -olefin containing copolymer and (2) a crosslinking agent; and (B) reacting said composition with the carrier during uniaxial or biaxial stretching and heat setting; and

(b) a transfer portion, said transfer portion being positioned over said support portion for transfer of the transfer portion from the support portion to an article under conditions of pressure, said transfer portion comprising

(i) an ink design layer, said ink design layer being positioned over said first release coating, and

(ii) a pressure-sensitive adhesive layer positioned over said ink design layer;

(c) whereby said first release coating separates cleanly from said transfer portion with no visually discernible portion of said release coating being transferred to the article along with the transfer portion.

39. (Original) The transfer label as claimed in claim 38 wherein said first release coating has a total surface energy of about 30 mN/m, of which about 1.3 mN/m is polar surface energy.

40. (Original) The transfer label as claimed in claim 38 wherein said first release coating is in direct contact with said transfer portion.

41. (Original) The transfer label as claimed in claim 38 wherein said transfer portion further comprises a protective lacquer layer, said ink design layer being positioned over said protective lacquer layer, said first release coating being in direct contact with said protective lacquer layer.

42. (Original) The transfer label as claimed in claim 38 wherein said first release coating has a thickness of about 0.01 to 10 microns.

43. (Original) The transfer label as claimed in claim 42 wherein said first release coating has a thickness of about 0.02 to 1 micron.

44. (Original) The transfer label as claimed in claim 43 wherein said first release coating has a thickness of about 0.1 micron.

45. (Original) The transfer label as claimed in claim 38 wherein said first release coating has a carbon content (by atomic %) of about 90 to 99.9% and an oxygen content (by atomic %) of about 0.1 to 10%, as measured by X-ray photoelectron spectroscopy.

46. (Original) The transfer label as claimed in claim 45 wherein said first release coating has a carbon content (by atomic %) of about 97% and an oxygen content (by atomic %) of about 3%, as measured by X-ray photoelectron spectroscopy.

Claim 47 (Canceled).

48. (Original) The transfer label as claimed in claim 38 wherein said carrier is made of a polymer selected from the group consisting of polyethylene terephthalate and polyethylene naphthylene.

49. (Original) The transfer label as claimed in claim 38 wherein said carrier is made of a polymer selected from the group consisting of polyethylene and polypropylene.

Claim 50 (Canceled).

51. (Currently amended) The transfer label as claimed in claim ~~50~~38 wherein said functionalized α -olefin containing copolymer is an acid functionalized α -olefin containing copolymer.

52. (Original) The transfer label as claimed in claim 51 wherein said acid functionalized α -olefin containing copolymer is selected from the group consisting of ethylene/acrylic acid

copolymers; ethylene/methacrylic acid copolymers; ethylene/vinylacetate/acrylic acid terpolymers; ethylene/methacrylamide copolymers; ethylene/glycidyl methacrylate copolymers; ethylene/dimethylaminoethyl methacrylate copolymers; ethylene/2-hydroxyethyl acrylate copolymers; and propylene/acrylic acid copolymers.

53. (Original) The transfer label as claimed in claim 52 wherein said crosslinking agent is selected from the group consisting of amino formaldehyde resins, polyvalent metal salts, isocyanates, blocked isocyanates, epoxy resins and polyfunctional aziridines.

54. (Original) The transfer label as claimed in claim 40 wherein said protective lacquer layer comprises a phenoxy resin.

55. (Original) The transfer label as claimed in claim 38 wherein said support portion further comprises a second release coating, said second release coating being positioned under said carrier.

56. (Original) The transfer label as claimed in claim 55 wherein said second release coating is substantially identical in composition to said first release coating.

Claims 57-79 (Canceled).